

METHOD FOR QUANTITATIVE VIDEO-MICROSCOPY AND ASSOCIATED
SYSTEM AND COMPUTER SOFTWARE PROGRAM PRODUCT

ABSTRACT OF THE DISCLOSURE

A method of determining an amount of at least one molecular specie comprising a sample is provided, each molecular specie being indicated by a dye. The amount of the molecular specie is determined from an image of the sample captured as image data by a color image acquisition device in a video-microscopy system. An optical density of the sample is first determined in each of a red, green, and blue channel at a particular pixel in the image. A corresponding optical density matrix is thereafter formed for that pixel. The optical density matrix is then multiplied by the inverse of a relative absorption coefficient matrix so as to form a resultant matrix for the pixel. The relative absorption coefficient matrix comprises a relative absorption coefficient for each dye, independently of the sample, in each of the red, green, and blue channels. The resultant matrix thus comprises the amount of each molecular specie, as indicated by the respective dye, for that pixel. Associated systems and computer software program products are also provided.